

Remarks

The Applicants request the addition of new Claims 43-52.

New Claim 43 is for an isolated polypeptide that has at least 90% sequence identity to SEQ ID NO: 4 and has similar antigenic or immunogenic characteristics as the protein of Claim 38. New Claim 44 is for a vaccine containing the protein of Claim 43 and a pharmaceutically acceptable carrier. Claim 45 covers a pharmaceutical composition containing the protein of Claim 43 and a pharmaceutically acceptable carrier. Claim 46 covers a diagnostic composition containing the protein of Claim 43. Claim 47 is for a diagnostic kit containing the protein of Claim 43 and a suitable detection means.

Claims 48-52 are similar to Claims 43-47 except that the sequence identity is at least 95% to the amino acid sequence of SEQ ID NO: 4.

No new matter is being added.

The Applicants are also requesting several amendments to the Specification.

On page 1, line 1, the Applicants request that U.S. Patent Application 10/049,086 be changed to U.S. Patent 6,919,083.

On pages 2 and 3, the Applicants request the deletion of several words from several paragraphs to make the Specification read more correctly. Some of the polynucleotide and amino acid sequences disclosed in the Specification are not surface antigens and thus it was incorrect to refer to them as surface antigens. This was an inadvertent error.

While some of the "antigens" in the Applicants' patent application are "surface antigens" (*i.e.*, the hemagglutinin protein is SEQ ID NO: 10), it is clear that some proteins are **not** "surface" antigens. For example, on page 8, line 25 through page 9, line 6, the Specification discusses the proteins M1 and M2 of ISAV. The amino acid sequences of M1 and M2 are in SEQ ID NO: 6 and 7 (from Figures 6a and 6b). It is predicted that these proteins are "membrane associated proteins" (page 9, lines 2-3). ISAV is in the Orthomyxovirus family of viruses of which the influenza virus is also a member. The matrix proteins in the influenza virus are located on the **inside** of the lipid membrane of the virus and are not "surface" antigens. So, it would be expected that the M1 and M2 proteins of ISAV are also located **inside** the lipid membrane and not be "surface" antigens.

Another example is found on page 8, lines 12-23 of the Specification which states that the protein ISA1mta (SEQ ID NO: 4) appears to be "integrally associated with the membranes of ISAV infected tissue cultures" (lines 19-20). The Specification does not state that ISA1mta

(SEQ ID NO: 4) is a "surface" antigen of ISAV, rather than it is associated with the member of cells infected with ISAV. Furthermore, ISA1mta (SEQ ID NO: 4), the protein in Claim 38, has 97.4% sequence identity to SEQ ID NO: 2 in U.S. Patent 6,471,964 (this fact is acknowledged by the Examiner in the Office Action). In U.S. Patent 6,471,964, the protein of SEQ ID NO: 2 is identified as a structural protein, not a protein displayed on the surface of the virus. Thus, it would be more proper to refer to the protein of SEQ ID NO: 4 as an "antigen" rather than a "surface antigen".

Based on this information, the Applicants submit that it was an inadvertent error to refer to all of the sequences in the present application as "surface antigens". Thus, Applicants' amendment to delete the term "surface" on pages 2 and 3 is justified. Applicants request entry of these amendments to correct the inadvertent error.

On page 6, the Applicants request the addition of the description of Figures 7 and 8. The information about Figures 7 and 8 are contained within the Specification.

No new matter is being added by these amendments.

Inventorship

The Applicants thank the Examiner's acceptance of the amendment to correct inventorship.

Objections to Specification

The Examiner had the following three objections concerning the Specification. First, the Examiner stated that the sequence in the drawings must be referenced by sequence identifiers. Second, the first line of the first page must reflect that U.S. Application 10/049,086 is now U.S. Patent 6,919,083. Third, Figures 7 and 8 are not referenced in the Specification.

The Applicants thank the Examiner for pointing out these issues with the Specification.

Concerning the sequences in the drawings, the Applicants understand that it is normal U.S. practice to place the sequence identifiers with the brief description of the drawings. However, this application was written by U.K. patent attorneys who were not very familiar with U.S. practice. They placed a list of sequence identifiers starting on page 6, line 14 through page 7, line 11. In this list, each sequence contained within a figure is identified by the SEQ ID NO. Because the information is contained shortly after the description of the figures, the Applicants request that the Examiner accept this list as meeting U.S. practice requirements. If the Examiner feels strongly about the SEQ ID NO's being within the description of the figures, the Applicants will make that amendment.

The Applicants are amending page 1, line 1 of the Specification to reflect that U.S. Patent Application 10/049,086 is now U.S. Patent 6,919,083.

The Applicants are amending page 6 to add the description of Figure 7 and 8, using the information contained within the rest of the Specification.

Applicants respectfully request the withdrawal of the objections to the Specification.

Priority

The Examiner acknowledged the Applicants' claim for foreign priority under 35 U.S.C. § 119 (a)-(d) and noted that certified copies of application 9918588.6 and 0005848.7 have been filed with the USPTO for the parent application.

The Examiner indicated that a certified copy of foreign application 0006674.6 was not filed with the USPTO, or at least that the certified copy that was filed for the parent application cannot be located. The Examiner requested another certified copy of foreign application 0006674.6.

Applicants checked on USPTO's PAIR and note that a certified copy of foreign application 0006674.6 was placed in the file of U.S. Patent 6,919,083 on February 13, 2006 which is after the mail date of this Office Action. The Applicants believe that this certified copy of foreign application 0006674.6 should satisfy this requirement. If not, the Applicants will gladly supply another certified copy.

35 U.S.C. § 112, second paragraph

The Examiner rejected Claims 38-42 under 35 U.S.C. § 112, second paragraph for failing to particularly point out and distinctly claim the subject matter which the Applicants regards as the invention. In particular, the Examiner felt that the phrase "derivatives thereof" in Claim 38 was unclear. Because Claims 39-42 depend on Claim 38 and do not further define the phrase "derivatives thereof" the Examiner rejected these claims. The Examiner provided the helpful suggestion to delete this phrase from the claims.

The Applicants thank the Examiner for the helpful suggestion. The Applicants have deleted the phrase "or a derivative thereof, wherein the derivative thereof has antigenic or immunogenic characteristics of the amino acid sequence according to SEQ ID NO: 4" from Claim 38.

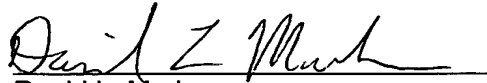
The Applicants authorize the Commissioner to charge all fees due to Deposit Account 19-0134.

The Applicants believe that the amendments have overcome the Examiner's rejections and objections. The Applicants believe that all the pending claims are allowable. The Applicants kindly request that the Examiner withdraw the rejections and objections and allow the pending claims.

If a telephone interview would be of assistance in advancing the prosecution of this application, the Applicants' undersigned attorney invites the Examiner to telephone him at the number provided below.

Respectfully submitted,

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